

CLAIMS

1. A silicon carbide product having a surface with a concentration of metal impurities equal to or less than 1×10^{11} (atoms/cm²).
- 5 2. The silicon carbide product according to claim 1, wherein said metal impurities are at least one of iron or an iron compound, Ni, and Cu.
3. The silicon carbide product according to claim 1 or 2, wherein characterized in that said product is at least one of a semiconductor device, a semiconductor device manufacturing member, and a structure.
- 10 4. A silicon carbide product cleaning method comprising the step of immersing silicon carbide in an acid to reduce surface metal impurities to 1×10^{11} (atoms/cm²) or less.
5. A method of manufacturing a silicon carbide product comprising the step of cleaning silicon carbide with an acid to reduce surface metal impurities
15 to 1×10^{11} (atoms/cm²) or less.
6. The method according to claim 5, wherein said acid is hydrofluoric acid or hydrochloric acid.
7. The method according to claim 6, wherein said hydrofluoric acid has a concentration exceeding 45%.
- 20 8. The method according to claim 7, wherein said hydrofluoric acid has a concentration of about 50%.
9. The method according to claim 6, wherein said hydrochloric acid has a concentration of 35% or more.
10. The method according to claim 8, wherein said hydrochloric acid
25 has a concentration of about 36%.
11. The method according to claim 5, wherein said acid is a liquid containing sulfuric acid and a hydrogen peroxide solution.

12. The method according to claim 11, wherein said liquid containing said sulfuric acid and said hydrogen peroxide solution has a pH of 4 or less.

13. The method according to claim 12, wherein said sulfuric acid and said hydrogen peroxide solution respectively have concentrations of about 97%
5 and about 30% and are mixed in a volume ratio of about 4:1.

14. A silicon carbide product manufactured by the method according to claim 5, said silicon carbide product being a semiconductor device, a semiconductor device manufacturing member, or a structure.

AMENDMENT OF CLAIMS

[Received by International Bureau on November 30, 2004 (30. 11. 04): Original claims 7, 9, and 10 are amended; Other claims are kept unchanged.]

- 5 1. A silicon carbide product having a surface with a concentration of metal impurities equal to or less than 1×10^{11} (atoms/cm²).
2. The silicon carbide product according to claim 1, wherein said metal impurities are at least one of iron or an iron compound, Ni, and Cu.
3. The silicon carbide product according to claim 1 or 2,
10 wherein characterized in that said product is at least one of a semiconductor device, a semiconductor device manufacturing member, and a structure.
4. A silicon carbide product cleaning method comprising the step of immersing silicon carbide in an acid to reduce surface metal impurities to 1×10^{11} (atoms/cm²) or less.
- 15 5. A method of manufacturing a silicon carbide product comprising the step of cleaning silicon carbide with an acid to reduce surface metal impurities to 1×10^{11} (atoms/cm²) or less.
6. The method according to claim 5, wherein said acid is hydrofluoric acid or hydrochloric acid.
- 20 7. (Amended) The method according to claim 6, wherein said acid is the hydrofluoric acid and said hydrofluoric acid has a concentration exceeding 45%.
8. The method according to claim 7, wherein said hydrofluoric acid has a concentration of about 50%.
- 25 9. (Amended) The method product according to claim 6, wherein said acid is the hydrochloric acid and said hydrochloric acid has a concentration of 35% or more.

10. (Amended) The method according to claim 9, wherein that said hydrochloric acid has a concentration of about 36%.

11. The method according to claim 5, wherein said acid is a liquid containing sulfuric acid and a hydrogen peroxide solution.

5 12. The method according to claim 11, wherein said liquid containing said sulfuric acid and said hydrogen peroxide solution has a pH of 4 or less.

13. The method according to claim 12, wherein said sulfuric acid and said hydrogen peroxide solution respectively have concentrations of about 97% and about 30% and are mixed in a volume ratio of about 4:1.

10 14. A silicon carbide product manufactured by the method according to claim 5, said silicon carbide product being a semiconductor device, a semiconductor device manufacturing member, or a structure.